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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/410,751	10/01/1999	JEA-YONG YOO	2950-0138	7386

7590 09/10/2004

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EXAMINER

TRAN, THAI Q

ART UNIT PAPER NUMBER

2616

DATE MAILED: 09/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/410,751

Applicant(s)

YOO ET AL.

Examiner

Thai Tran

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 June 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

1. Applicant's arguments with respect to claims 1-20 based on the English translation of the priority document (KR 10-1998-41937, filed on October 2, 1998) have been considered but are moot in view of the new ground(s) of rejection. The finality of the last Office Action has been withdrawn and the after final amendment filed June 18, 2004 has been entered. It is noted that the after final amendment filed June 18, 2004 did not include **the statement that the translation of the certified copy is accurate**. Accordingly, the statement is requested.

### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

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3. Claims 1-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagihara et al (US 6,697,432 B2) in view of Cloutier (US 5,966,387).

Regarding claim 1, Yanagihara et al discloses an apparatus (digital recording/reproducing device 106 of Fig. 1, col. 3, lines 31-42) for receiving digital transport stream video packets from a set top box through a digital interface (a set top box 104 and IEEE 1394 of Fig. 1, col. 3, lines 31-42 and col. 7, lines 32-35). However, Yanagihara et al does not specifically disclose that the digital transport stream packets have program clock references, the steps of (a) detecting program clock references contained in digital transport stream packets; (b) creating a transport time reference for each of the transport stream packets based upon the detected program clock references and arrival times of the corresponding transport stream packets; and (c) creating the transport stream units by adding each of the created transport time references to an associated one of the transport stream packets.

It is noted that MPEG packets having program clock references for synchronization is old and well known in the art and; therefore, Official Notice is taken.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the well known program clock references into the MPEG packets of Yanagihara et al for the purpose of synchronization.

Additionally, Cloutier, as discussed in the last Office Action, teaches an apparatus and method for correcting jitter in data packet (col. 4, lines 54-61) having the steps of:

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(a) detecting program clock references (the PCR detector 124 of Fig. 2, col. 10, lines 27-39) contained in digital transport stream packets;

(b) creating a transport time reference for each of the transport stream packets based upon the detected program clock references and arrival times of the corresponding transport stream packets(col. 10, lines 41-52 and col. 11, lines 20-47); and

(c) creating the transport stream units by adding each of the created transport time references to an associated one of the transport stream packets (col. 11, lines 20-47). Cloutier also teaches that, although the preferred embodiment of the present invention has been described with respect to the transport of MPEG-encoded data streams in an ATM network, it will be appreciated that any coding standard can be used for the data being transported, so long as the coded data stream includes time stamp information identifying an expected arrival time of the corresponding data packet stream segment (col. 19, lines 17-23).

Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the apparatus of correcting jitter in data packets as taught by Cloutier into Yanagihara et al's system in order to increase the quality of the video signal of Yanagihara et al by correcting jitter in data packets of the video signal of Yanagihara et al.

Regarding claim 2, Cloutier discloses the claimed wherein said step (b) creates the transport time reference for each of the transport stream packets based upon an error, defined as a difference between time differences of selectively inserted program

clock references and an arrival time difference for each of the transport stream packets containing the program clock references (col. 12, lines 27-54).

Regarding claim 3, Cloutier discloses the claimed wherein said step (b) increases or decreases the transport time reference by a time corresponding to said error (col. 12, lines 27-54).

Regarding claim 4, Cloutier discloses the claimed wherein said step (b) creates the transport time reference for an arbitrary one of the transport stream packets received between two of the transport stream packets having program clock references by compensating the arrival time of the arbitrary one of the transport stream packets by an amount corresponding to a proportion of the arrival time difference between the arbitrary one of the transport stream packets and a first one of said two transport stream packets to the arrival time difference of said two transport stream packets (col. 12, lines 27-54).

Regarding claim 5, Cloutier discloses the claimed wherein said transport time reference is reference information upon which timing of transmission of the transport stream packets is based when the transport stream packets are transmitted to an external device after the transport stream packets are reproduced from a storage medium (col. 7, lines 9-18, col. 9, lines 44-54, and col. 16, lines 58-63).

Regarding claim 6, Yanagihara et al discloses the claimed recording the created transport stream units on a rewritable recording medium having a digital data recording format (D-VHS deck disclosed in col. 5, lines 34-42).

Regarding claim 7, Yanagihara et al discloses an apparatus (digital recording/reproducing device 106 of Fig. 1, col. 3, lines 31-42) for receiving digital transport stream video packets from a set top box through a digital interface (a set top box 104 and IEEE 1394 of Fig. 1, col. 3, lines 31-42 and col. 7, lines 32-35). However, Yanagihara et al does not specifically discloses that the digital transport stream packets have program clock references, the steps of (a) storing digital transport stream packets together with their arrival times temporarily; (b) compensating the temporarily stored arrival time of each of the transport stream packets based upon a time difference of program clock references and an arrival time difference of the transport stream packets when more than two of the program clock references are detected from said received digital transport stream packets; and (c) creating transport stream units by adding each of the compensated arrival times to associated ones of the transport stream packets as a transport time reference.

It is noted that MPEG packets having program clock references for synchronization is old and well known in the art and; therefore, Official Notice is taken.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the well known program clock references into the MPEG packets of Yanagihara et al for the purpose of synchronization.

Additionally, Cloutier, as discussed in the last Office Action, teaches an apparatus and method for correcting jitter in data packet (col. 4, lines 54-61) having the steps of:

(a) storing digital transport stream packets together with their arrival times temporarily (a buffer 144 of Fig. 2, col. 11, lines 20-47);

(b) compensating the temporarily stored arrival time of each of the transport stream packets based upon a time difference of program clock references and an arrival time difference of the transport stream packets when more than two of the program clock references are detected from said received digital transport stream packets (col. 12, lines 27-54); and

(c) creating transport stream units by adding each of the compensated arrival times to associated ones of the transport stream packets as a transport time reference (col. 11, lines 20-47). Cloutier also teaches that, although the preferred embodiment of the present invention has been described with respect to the transport of MPEG-encoded data streams in an ATM network, it will be appreciated that any coding standard can be used for the data being transported, so long as the coded data stream includes time stamp information identifying an expected arrival time of the corresponding data packet stream segment (col. 19, lines 17-23).

Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the apparatus of correcting jitter in data packets as taught by Cloutier into Yanagihara et al's system in order to increase the quality of the video signal of Yanagihara et al by correcting jitter in data packets of the video signal of Yanagihara et al.

Regarding claim 8, Yanagihara et al discloses an apparatus (digital recording/reproducing device 106 of Fig. 1, col. 3, lines 31-42) for receiving digital



transport stream video packets from a set top box through a digital interface (a set top box 104 and IEEE 1394 of Fig. 1, col. 3, lines 31-42 and col. 7, lines 32-35). However, Yanagihara et al does not specifically disclose that the digital transport stream packets have program clock references, the steps of (a) detecting program clock references from transport stream packets while storing the received digital transport stream packets together with their arrival times; (b) detecting the stored arrival times of the transport stream packets containing the detected program clock references; (c) comparing a difference of the two program clock references detected in said step (a) with an arrival time difference of the two transport stream packets detected in said step (b); (d) compensating the stored arrival time of each of the transport stream packets based upon the comparison result; and (e) creating transport stream units by adding the compensated arrival time to each of the transport stream packets as a transport time reference.

It is noted that MPEG packets having program clock references for synchronization is old and well known in the art and; therefore, Official Notice is taken.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the well known program clock references into the MPEG packets of Yanagihara et al for the purpose of synchronization.

Additionally, Cloutier, as discussed in the last Office Action, teaches an apparatus and method for correcting jitter in data packet (col. 4, lines 54-61) having the steps of:

(a) detecting program clock references from received transport stream packets while storing the received digital transport stream packets together with their arrival times (col. 10, lines 32-39 and col. 11, lines 20-47);

(b) detecting the stored arrival times of the transport stream packets containing the detected program clock references (col. 10, lines 32-39);

(c) comparing a difference of the two program clock references detected in said step (a) with an arrival time difference of the two transport stream packets detected in said step (b) (col. 12, lines 27-54);

(d) compensating the stored arrival time of each of the transport stream packets based upon the comparison result (col. 12, lines 27-54); and

(e) creating transport stream units to adding the compensated arrival time to each of the transport stream packets as a transport time reference (col. 11, lines 20-47). Cloutier also teaches that, although the preferred embodiment of the present invention has been described with respect to the transport of MPEG-encoded data streams in an ATM network, it will be appreciated that any coding standard can be used for the data being transported, so long as the coded data stream includes time stamp information identifying an expected arrival time of the corresponding data packet stream segment (col. 19, lines 17-23).

Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the apparatus of correcting jitter in data packets as taught by Cloutier into Yanagihara et al's system in order to increase the quality of the

video signal of Yanagihara et al by correcting jitter in data packets of the video signal of Yanagihara et al.

Regarding claim 9, Yanagihara et al discloses an apparatus (digital recording/reproducing device 106 of Fig. 1, col. 3, lines 31-42) for receiving digital transport stream video packets from a set top box through a digital interface (a set top box 104 and IEEE 1394 of Fig. 1, col. 3, lines 31-42 and col. 7, lines 32-35). However, Yanagihara et al does not specifically disclose that the digital transport stream packets have program clock references, a means for detecting program clock references contained in digital transport stream packets; a means for comparing the detected program clock references with arrival times of the transport stream packets; a means for creating a transport time reference for each of said transport stream packets based upon the comparison result; and a means for constructing transport stream units by adding the created transport time reference of each of the transport stream packets to an associated one of the transport stream packets.

It is noted that MPEG packets having program clock references for synchronization is old and well known in the art and; therefore, Official Notice is taken.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the well known program clock references into the MPEG packets of Yanagihara et al for the purpose of synchronization.

Additionally, Cloutier, as discussed in the last Office Action, teaches an apparatus and method for correcting jitter in data packet (Fig. 2, col. 4, lines 54-61) having

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a means (the PCR detector 124 of Fig. 2, col. 10, lines 32-39) for detecting program clock references contained in received digital transport stream packets;

a means (col. 12, lines 27-54) for comparing the detected program clock references with arrival times of the transport stream packets;

a means (col. 12, lines 27-54) for creating a transport time reference for each of said transport stream packets based upon the comparison result; and

a means (col. 11, lines 20-47) for constructing transport stream units by adding the created transport time reference of each of the transport stream packets to an associated one of the transport stream packets. Cloutier also teaches that, although the preferred embodiment of the present invention has been described with respect to the transport of MPEG-encoded data streams in an ATM network, it will be appreciated that any coding standard can be used for the data being transported, so long as the coded data stream includes time stamp information identifying an expected arrival time of the corresponding data packet stream segment (col. 19, lines 17-23).

Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the apparatus of correcting jitter in data packets as taught by Cloutier into Yanagihara et al's system in order to increase the quality of the video signal of Yanagihara et al by correcting jitter in data packets of the video signal of Yanagihara et al.

Regarding claim 10, Yanagihara et al discloses an apparatus (digital recording/reproducing device 106 of Fig. 1, col. 3, lines 31-42) for receiving digital transport stream video packets from a set top box through a digital interface (a set top

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box 104 and IEEE 1394 of Fig. 1, col. 3, lines 31-42 and col. 7, lines 32-35). However, Yanagihara et al does not specifically disclose that the digital transport stream packets have program clock references, a means for creating arrival times of digital transport stream packets; a means for detecting program clock references contained in the received digital transport stream packets; a means for comparing the detected program clock references with the created arrival times; a means for compensating the created arrival times based upon the comparison result; and a means for constructing transport stream units by adding a compensated arrival time to a corresponding one of the transport stream packets as a transport time reference.

It is noted that MPEG packets having program clock references for synchronization is old and well known in the art and; therefore, Official Notice is taken.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the well known program clock references into the MPEG packets of Yanagihara et al for the purpose of synchronization.

Additionally, Cloutier, as discussed in the last Office Action, teaches an apparatus and method for correcting jitter in data packet (Fig. 2, col. 4, lines 54-61) having

a means (the jitter calculator 168 of Fig. 2, col. 12, lines 45-54) for creating arrival times of received digital transport stream packets;

a means (the PCR detector 124 of Fig. 2, col. 12, lines 32-39) for detecting program clock references contained in the received digital transport stream packets;

a means (col. 12, lines 27-54) for comparing the detected program clock references with the created arrival times;

a means (col. 12, lines 27-54) for compensating the created arrival times based upon the comparison result; and

a means (col. 11, lines 20-47) for constructing transport stream units by adding a compensated arrival time to a corresponding one of the transport stream packets as a transport time reference. Cloutier also teaches that, although the preferred embodiment of the present invention has been described with respect to the transport of MPEG-encoded data streams in an ATM network, it will be appreciated that any coding standard can be used for the data being transported, so long as the coded data stream includes time stamp information identifying an expected arrival time of the corresponding data packet stream segment (col. 19, lines 17-23).

Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the apparatus of correcting jitter in data packets as taught by Cloutier into Yanagihara et al's system in order to increase the quality of the video signal of Yanagihara et al by correcting jitter in data packets of the video signal of Yanagihara et al.

Regarding claim 11, Cloutier discloses the claimed wherein said compensating means compensates the created arrival times of the received digital transport stream packets so that differences between the detected program clock references are equal to differences between the arrival times of the transport stream packets containing the detected program clock references (col. 11, lines 20-47 and col. 12, lines 27-54).

Regarding claim 12, Yanagihara et al discloses an apparatus (digital recording/reproducing device 106 of Fig. 1, col. 3, lines 31-42) for receiving digital transport stream video packets from a set top box through a digital interface (a set top box 104 and IEEE 1394 of Fig. 1, col. 3, lines 31-42 and col. 7, lines 32-35). However, Yanagihara et al does not specifically discloses that the digital transport stream packets have program clock references, a time information extractor for detecting program clock references contained in digital transport stream packets; a time comparator for comparing the detected program clock references from said time information extractor with the arrival times of the transport stream packets; a transport time generator for creating a transport time reference for each of said each transport stream packets based upon the comparison result from said time comparator; and a data constructor for constructing transport stream units by adding the created transport time reference from said transport time generator of each of said transport stream packets to an associated one of the transport stream packets.

It is noted that MPEG packets having program clock references for synchronization is old and well known in the art and; therefore, Official Notice is taken.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the well known program clock references into the MPEG packets of Yanagihara et al for the purpose of synchronization.

Additionally, Cloutier, as discussed in the last Office Action, teaches an apparatus and method for correcting jitter in data packet (Fig. 2, col. 4, lines 54-61) having

a time information extractor (the PCR detector 124 of Fig. 2, col. 12, lines 32-39) for detecting program clock references contained in received digital transport stream packets;

a time comparator (col. 12, lines 27-54) for comparing the detected program clock references from said time information extractor with arrival times of the transport stream packets;

a transport time generator (col. 12, lines 27-54) for creating a transport time reference for each of said transport stream packets based upon the comparison result from said time comparator; and

a data constructor (col. 11, lines 20-47) for constructing transport stream units by adding the created transport time reference from said transport time generator of each of said transport stream packets to an associated one of the transport stream packets. Cloutier also teaches that, although the preferred embodiment of the present invention has been described with respect to the transport of MPEG-encoded data streams in an ATM network, it will be appreciated that any coding standard can be used for the data being transported, so long as the coded data stream includes time stamp information identifying an expected arrival time of the corresponding data packet stream segment (col. 19, lines 17-23).

Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the apparatus of correcting jitter in data packets as taught by Cloutier into Yanagihara et al's system in order to increase the quality of the



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video signal of Yanagihara et al by correcting jitter in data packets of the video signal of Yanagihara et al.

Regarding claim 13, Cloutier discloses wherein said transport time generator creates the transport time reference for each of the transport stream packets based upon an error, defined as a difference between time differences of the detected program clock references and the arrival time difference for each of the transport stream packets containing the program clock references (col. 12, lines 27-54).

Regarding claim 14, Cloutier discloses the claimed wherein said transport time generator increases or decreases the transport time reference by a time proportional to said error (col. 12, lines 27-54).

Regarding claim 15, Cloutier discloses the claimed wherein said transport time generator creates the transport time reference for an arbitrary one of the transport stream packets received between two of the transport stream packets having the program clock references by compensating the arrival time of the arbitrary transport stream packet by an amount corresponding to a proportion of the arrival time difference between the arbitrary transport stream packet and a first transport stream packet of said two transport stream packets to the arrival time difference of said two transport stream packets (col. 12, lines 27-54).

Regarding claim 16, Yanagihara et al discloses an apparatus (digital recording/reproducing device 106 of Fig. 1, col. 3, lines 31-42) for receiving digital transport stream video packets from a set top box through a digital interface (a set top box 104 and IEEE 1394 of Fig. 1, col. 3, lines 31-42 and col. 7, lines 32-35). However,

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Yanagihara et al does not specifically disclose that the digital transport stream packets have program clock references, a transport time generator for creating arrival times of digital transport stream packets; a time information extractor for detecting program clock references contained in the received digital transport stream packets; a time comparator for comparing the detected program clock references from said time information generator with the created arrival times from said transport time generator; a time compensator for compensating the created arrival times from said transport time generator based upon the comparison result of said time comparator; and a data constructor for constructing transport stream units by adding the compensated arrival times from said time compensator to the corresponding transport stream packets as transport time references.

It is noted that MPEG packets having program clock references for synchronization is old and well known in the art and; therefore, Official Notice is taken.

It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the well known program clock references into the MPEG packets of Yanagihara et al for the purpose of synchronization.

Additionally, Cloutier, as discussed in the last Office Action, teaches an apparatus and method for correcting jitter in data packet (Fig. 2, col. 4, lines 54-61) having

a transport time generator (the jitter calculator 168 of Fig. 2, col. 12, lines 45-54) for creating arrival times of received digital transport stream packets;

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a time information extractor (the PCR detector 124 of Fig. 2, col. 10, lines 33-39) for detecting program clock references contained in the received digital transport stream packets;

a time comparator (col. 12, lines 27-54) for comparing the detected program clock references from said time information generator with the created arrival times from said transport time generator;

a time compensator (col. 12, lines 27-54) for compensating the created arrival times from said transport time generator based upon the comparison result of said time comparator; and

a data constructor (col. 11, lines 20-47) for constructing transport stream units by adding the compensated arrival times from said time compensator to the corresponding transport stream packets as transport time references. Cloutier also teaches that, although the preferred embodiment of the present invention has been described with respect to the transport of MPEG-encoded data streams in an ATM network, it will be appreciated that any coding standard can be used for the data being transported, so long as the coded data stream includes time stamp information identifying an expected arrival time of the corresponding data packet stream segment (col. 19, lines 17-23).

Therefore, It would have been obvious to one of ordinary skill in the art at the time of the invention to incorporate the apparatus of correcting jitter in data packets as taught by Cloutier into Yanagihara et al's system in order to increase the quality of the video signal of Yanagihara et al by correcting jitter in data packets of the video signal of Yanagihara et al.

Regarding claim 17, Cloutier discloses the claimed wherein said time compensator compensates the created arrival time based upon an error, defined as a difference between time differences of the detected program clock references and the arrival time difference of each of the transport stream packets containing the program clock references (col. 12, lines 27-54).

Regarding claim 18, Cloutier discloses the claimed wherein said time compensator increases or decreases the created arrival time by a time proportional to said error (col. 12, lines 27-54).

Regarding claim 19, Cloutier discloses the claimed wherein said time compensator compensates the created arrival time of an arbitrary one of the transport stream packets received between two transport stream packets having the program clock references by an amount corresponding to a proportion of the arrival time difference between the arbitrary transport stream packet and a first transport stream packet of said two transport stream packets to the arrival time difference of said two transport stream packets (col. 12, lines 27-54).

4. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yanagihara et al (US 6,697,432 B2) in view of Cloutier (US 5,966,387) as applied to claim 16 above, and further in view of Markandey et al (US 2002/001989 A1).

The combination of Yanagihara et al and Cloutier discloses all the features of the instant claimed invention as discussed in claim 16 above including the claimed whereas a clock frequency for recording the digital transport stream is 27 Mhz (col. 4, lines 28-33

of Yanagihara) except for providing that wherein a clock frequency of the digital interface is 24.576 Mhz.

Markandey et al teaches data packet transmitted through IEEE 1394 having clock frequency of 24.576 Mhz (page 4, paragraph #0064).

It would have been obvious to one of ordinary skill in the art at the time of the invention to convert digital data to IEEE 1394 packets using 24.576 Mhz clock as taught by Markandey et al into Yanagihara et al's system in order to facilitate the conversion of digital video signal into IEEE 1394 data packets.

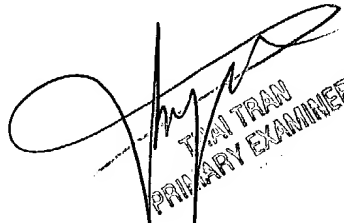
5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai Tran whose telephone number is (703) 305-4725.

The examiner can normally be reached on Mon. to Friday, 8:00 AM to 5:30 PM.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTQ



THAI TRAN  
PRIMARY EXAMINER